

# Work Order ID 51957

September 10, 2009 2:18:19 PM

Page 1

Item ID: D2500-3-100

Accept

Setup Start

Revision ID: G

Stop

Item Name: Ext'n - 'I' Beam Web 4"

Start Date: 9/10/09 Start Qty: 167.00

Cust Item ID:

Required Date: 10/05/09 Req'd Qty: 167.00

Customer:

Reference:

Approvals:

Process Plan: CL

Date: 09/09/10 Tooling:

Date:

Run Start

QC:

Date: SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2500	Rev U/R								

100

0.00

Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O: 16387 a) Extrude as per Dwg D2500 b) Material: 6061-T6 (QQ-A-200/8) c) Minimum yield tensile strength = 35 ksi d) Minimum ultimate tensile strength = 38 ksi e) Minimum elongation = 10% f) Order at 100" long g) Caradon Indalex Tool #

CL 09/10/09 167

110

0.00

Packaging

Receive & Inspect for Damage & Mat'l Certs

Memo

0.00

Packaging

Ensure material certification is attached

CL 09/10/09 215

120

0.00

QC

QC6- Inspect dimensions to drawing

Memo

0.00

Quality Control

Check Pull test per Dwg D2500 for compliance page attached. Check hardness with Webster tester

2) 502/10/00

CL 09/10/09 215

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 51957

September 10, 2009 2:18:19 PM

Page 2

Item ID: D2500-3-100

Accept

Setup Start

Revision ID: G

Stop

Item Name: Ext'n - 'I' Beam Web 4"

Start Date: 9/10/09 Start Qty: 167.00

Cust Item ID:

Required Date: 10/05/09 Req'd Qty: 167.00

Customer:



Reference:

Run Start

Approvals: Process Plan: Date: Tooling: Date:

Stop

QC: Date: SPC (Y/N): Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <i>Skid tube</i>	0.00							
									
Packaging	Memo	0.00				<i>(215)</i>			
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
									
QC	Memo	0.00							
Quality Control									

*09/10/13 HD*  
*MF 09-10-09*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 10, 2009 2:18:18 PM

Work Order ID: 51957

Parent Item: D2500-3-100RevG

Parent Item Name: Ext'n - 'I' Beam Web 4"

Comments:



Start Date: 9/10/09

Required Date: 10/05/09

Start Qty: 167.00

Required Qty: 167.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2500-3-100P		Purchased	No				Each	0.0000	167.0000			
Ext'n - 'I' Beam Web 4"												



215  
C 9/10/09 (167)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN #	DRAWN BY P#	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2500	REV. G SHEET 1 OF 3
DATE 07.04.17		TITLE EXTRUSION	SCALE NTS
A	96.03.19	NEW ISSUE	
B	96.03.24	CHANGE INTERNAL WEB	
C	96.04.26	ADD D2500-3 WEB	
D	96.10.07	ADD MATERIAL PROPERTIES	
E	96.10.24	CHANGE MATERIAL TEMPER	
F	97.09.29	CHANGE MAT. TO 6061-T6	
G	07.04.17	ADD NOTES 3,5,6	

**RELEASED**  
07.06.28**UNDER REVIEW**

08.04.02

FOR REV. H

C209/09/10

W10: 51957

1. MATERIAL: 6061-T6 (QQ-A-200/8)

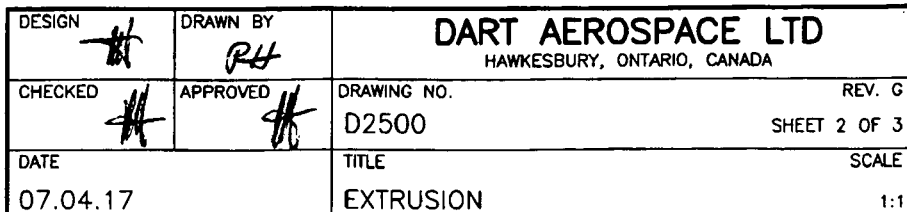
MINIMUM TENSILE YIELD STRENGTH = 35 KSI  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI  
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO  
ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY  
TO ENSURE THAT THE BATCH MEETS THE ABOVE  
MINIMUM MECHANICAL PROPERTIES

2. BREAK ALL SHARP CORNERS 0.010 MAX
3. ALL DIMENSIONS ARE IN INCHES
4. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
5. FOR D2500-1 PART NUMBER IS D2500-1-XXX WHERE XXX IS CUT LENGTH (EX. D2500-1-190 IS 190" LONG)  
D2500-1 EXTRUSION MANUFACTURED FROM:  
A) BON L DIE # 897015 -> PREFERRED  
B) CARADON MIDEAST DIE # PAH-28030  
C) CARADON MTL DIE # MH-18868
6. FOR D2500-3, PART NUMBER IS D2500-3-XXX WHERE XXX IS CUT LENGTH IN INCHES (EX. D2500-3-100 IS 100" LONG)  
D2500-3 EXTRUSION MANUFACTURED FROM:  
A) CARADON INDALEX DIE # MS-18867

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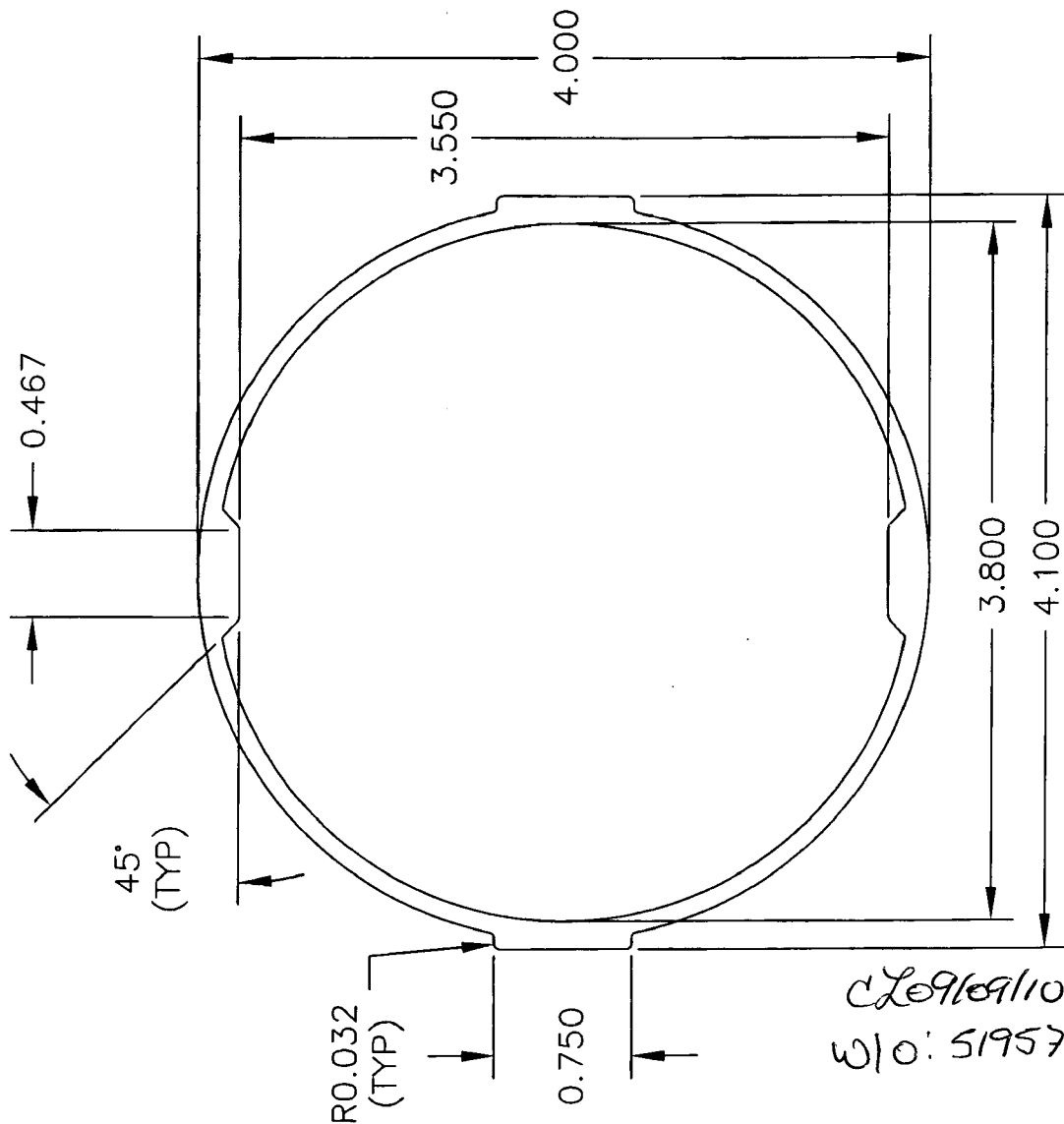
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RELEASED  
07-06-28-77

## UNDER REVIEW

08-04-02 UP  
FOZ REV. H



**D2500-1**

CLE9109/10  
W/O: 51957

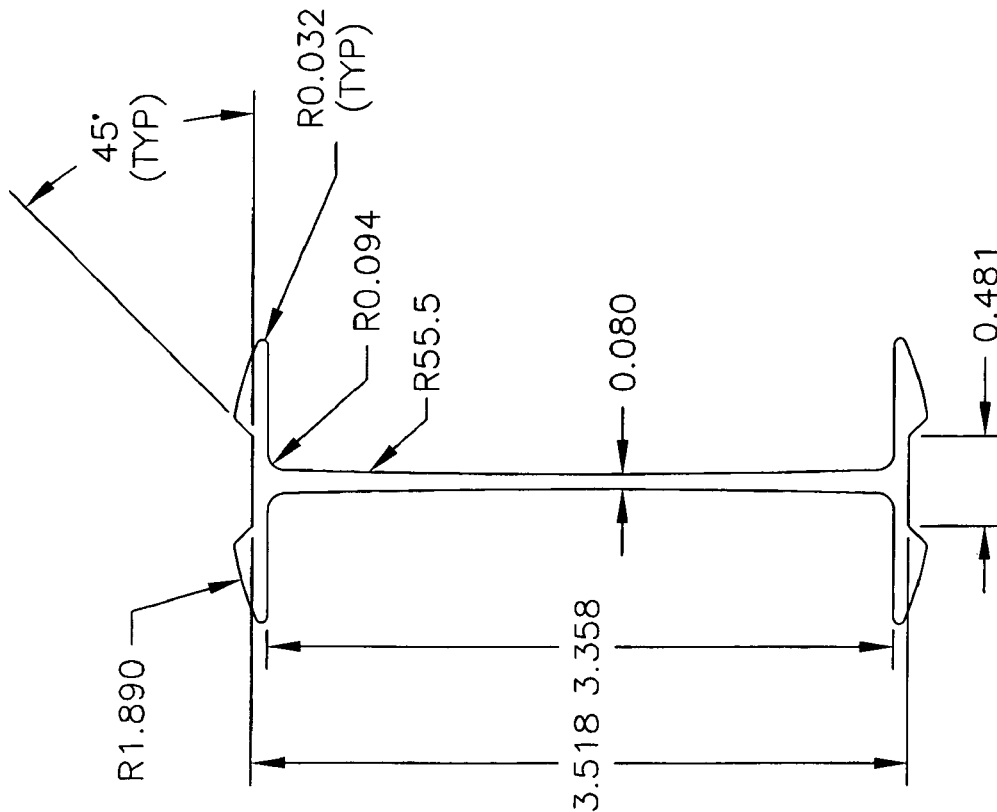




DESIGN <i>[Signature]</i>	DRAWN BY <i>RH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2500	REV. G SHEET 3 OF 3
DATE 07.04.17		TITLE EXTRUSION	SCALE 1:1

RELEASED  
07.06.28 *[Signature]*

UNDER REVIEW  
08.04.02 *[Signature]*  
FOR REV. H



D2500-3

*80*  
*75*  
*60*  
*70*  
*5*

*C209/09/10*  
*W/O: 51957*

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SOLD TO

SHIP TO

SPECIAL INSTRUCTIONS

P/S#: 720730

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ONT

OUR ORDER NO.  
9090764 1

E6A1K7

CUSTOMER P.S.T. : \*6122-5207

INDALEX G.S.T. REG NO: R857314058

PROJ:

Required Date:

CUST. NO.	G.S.T. NO.	PROV. SALES TAX	CUST. ORDER NO.	ORDER DATE	OUR ORDER DATE
201355	R136834041		PO10387	9/09/10	9/09/10
SALESMAN	SHIP VIA	PPD.	COL.	C.O.D.	F.O.B.
51		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			OUR PLANT	BUNDLED AND TAPED	CARTONED & INTERLEAVED
				<input type="checkbox"/>	<input type="checkbox"/>

DATE SHIPPED				SHIPPED VIA	
9/10/06				OTTAWA 7 OCT.	
BACK ORDERED		THIS SHIPMENT			AMOUNT
WEIGHT	PCS.	BDLES.	WEIGHT	PCS.	
			3	610	215 POUNDS EN KGS

ITEM NO.	ORDERED WEIGHT	PCS.	INDALEX DIE NO.	CUSTOMER DESCRIPTION	ALLOY AND TEMPER	LENGTH	UNIT PRICE
				EXTRUDE ONLY			
	490	167	MS 18867	D2500-3-100	6061 T6	2540	
				D2500-3			
				BUNDLE=	892677 892720 892731		
We hereby certify that the material supplied meets the chemical properties as published by the Aluminum Association and requirements of our Quality procedures							

S. 210/06

CUSTOMER'S COPY

Aluminum Association

FAX #: 16136321053

**sapa**

Sapa Canada, Inc  
325, Rue Avro  
Point-Claire, Quebec  
H9R 5W3  
Ph 514-697-5120 Fx 514-694-8310

Order Master/Acknowledgement/  
Confirmation De Commande

Our Order/Notre Commande

9090764

Aluminum Extrusions - Anodizing - Fabrication - Painting  
Profils D'Aluminum - Anodisation - Fabrication - Peinture

Sold to / Vendu à

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ONT

K6A1K7

Ship to / Expédiée à

Some unless otherwise noted

Special Instructions /  
Indications Spéciales

IXMBAUDOI P: 1

9090764

PST: \*6122-5207

GST REG NO: R857314058

Cust/Client		PST/TVP	Cust Ord/Comm	Client	Ord Dte/Dte	Comm	Terms/Conditions
201355			P010387		9/09/10	9/09/10	Net 30 Days
Rep/Vend	Ship Via/Expédiée Par	PPD	COL	COD	FOB/FAB	Date Req	
51	Our Truck	X		50		OC05NS	
Item No	Ordered Weight Pcs Poids Commande Pcs	Sapa Die No Matrice d'Sapa	Customer Description Description de Client	Alloy & Temper Alliage et Trempage	Length Longueur	Unit Price Prix Unitaire	UoM
01	499 167	NOTE: All weights are in KGS. All lengths are in MM.					
		01 EXTRUDE ONLY		100	EXTR/OVEN/INSP/SHI		
		DUE DATE:2009/10/05		OC05NS	PRC MTH: NP /ORD		
		MS 18867		6061	T6	2540	
		PART#:D2500-3-100 - D2500-3					
		Extrusion Price				5.5000	KG
<div>8 02/10/06</div>							

\*\* LAST PAGE \*\*

We acknowledge with thanks the receipt of your order and this is an exact copy of our entry. Please notify us immediately if there is an error in this entry as otherwise we shall understand that you agree that it has been correctly made. Please refer to our order number when making any inquiries.

Nous accusons reception de votre commande et nous vous en remercions. S'il vous plait, nous aviser immediatement s'il y a erreur dans votre commande sinon, nous la remplirons telle quelle. Pour d'autre informations concernant cette commande, s'il vous plait referez a notre numero de commande.

canford

325 rue Avro  
Pointe-Claire, QC, Canada, H9R 5W3  
Téléphone (514) 697-5120  
Fac-simile (514) 694-8310

**sapa:**

## Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**  
Adresse / Address : **1270 ABERDEEN STREET  
HAWKESBURY ONT,  
K6A 1K7**

# commande Sapa / Sapa order # : **9090764**  
# bon de commande / Purchase order # : **P010387**  
# de matrice / Die # : **MS 18867** Description : **D2500-3**  
Alliage & trempage / Alloy & temper : **6061 T6** Customer Part #: **D2500-3-100**  
# Contrôle / Control # : **5515-1**  
# Coulée / Cast # : **46731**

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	42994
Contrainte élastique Yield stress (psi)	35 000	39918
% élongation dans 2" % elongation in 2"	8	12
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	94

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	--	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 excepté pour la section 8.2 (nombre de spécimen) et AMS QQA 200/8 excepté pour la section 4.2.3.1 (nombre de spécimen) qui sont déterminés par les exigences du client.

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 except for section 8.2 (number of specimen) and AMS QQA 200/8 except for section 4.2.3.1 (number of specimen) which is determined by customer requirement.

Sincèrement vôtre,  
Yours truly,

date : **2009-09-25**

8 07/10/08



Bruno Morency  
Technicien de la qualité  
Quality technician



Sapa Canada, Inc.  
325 Rue Avro  
Pointe Claire  
Quebec  
H9R-5W3  
Tel: (514) 697-5120  
Fax: (514) 694-8310

---

TO : DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ONT

ATTENTION : CHRISTINA YOUNG  
PHONE : (905) 000-0000  
FAX : 16136321053

K6A1K7

CONTACT :  
PHONE : (514) 697-5120  
FAX : (514) 694-8310  
SALESPERSON : SERGE RANGER

PAGES : 2 (including this one)  
REF # : 0673570  
DATE : 10/06/09  
TIME : 11:02

---

THE FOLLOWING OPEN ORDER REPORT SHOWS THE STATUS OF ALL YOUR ORDERS WITH Indalex Limited.

IF YOU HAVE ANY QUESTIONS ON THESE ORDERS, PLEASE CONTACT THE NAME SHOWN ABOVE.

IF YOU WISH TO PLACE AN ORDER, PLEASE CONTACT YOUR SALESPERSON.

THANK YOU FOR YOUR BUSINESS.

---

REPORT ID: PPC042R

\*\* CUSTOMER OPEN ORDER STATUS REPORT \*\*

Branch: 2 10/06/09

USER ID: IXPROD2

FOR CUSTOMER: 201355

DART AEROSPACE LTD

DUE: 20081101 AND FORWARD

INSIDE RBP: JUDY BEAUDOIN

PAGE 1 11:02:31

2/2

P Due Date	Cust Part	P	Order	GR Cust P.O.	S	Die No.	E Ctrl	Tms	Finish	Finish	UNITS	UNITS	WIP	UNITS	Ready	In	UNITS	F O	Ordered U	O
B	Number	R		CD	H		X No.	Prc	Colour	Length	To Extr	Stock	Sched	To Pack	To ship	Transit	Shipped	R U	UNITS	M V

2	9/10/07	OC05RU	D2500-3-100	9090764	1 01	PO10387	MS	18867	05515	01		2540	MM			215		P		167 PC
---	---------	--------	-------------	---------	------	---------	----	-------	-------	----	--	------	----	--	--	-----	--	---	--	--------

\*\*\*\* END OF REPORT \*\*\*\*

SH-S=Hold

EX-Q=DoNotExtrude

FR-Q=PDC \$=COD C=COL P=PPD U=P/D T=T/P

OV-M=MultiVendor

06-Oct-09 12:04 Ref:0673570

Indalex Limited



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*PO REPRINT\*\*\*

Purchase Order ID PO10387

Purchase Order Date 9/10/09

PO Print Date 9/10/09

Page Number 1 of 1

Order From :

VC-IND006

INDALEX LIMITEE  
325 RUE AVRO  
POINTE-CLAIRE, QC H9R 5W3  
CA

**FAKED**  
09/09/09

Contact Name  
Vendor Phone 514 697 5120  
Vendor Fax 514 694 8310  
Vendor Account Nbr

Buyer Chantal Lavoie  
Requisition Nbr  
Tax Resale Nbr 10127-2607  
Terms Net 30  
Currency CAD  
FOB

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2500-3-100P	Ext'n -I' Beam Web 4"	10/05/09 Yes	167.00 Each	Yours ppd	\$12.7240	\$2,124.9

Special Inst: EXTRUDE AS PER DWG D2500  
REV. G  
MATERIAL: 6061-T6 (QQ-A-200/8)  
MINIMUM YIELD TENSILE  
STRENGTH = 35KSI  
MINIMUM ULTIMATE TENSILE  
STRENGTH = 38KSI  
MINIMUM ELONGATION = 8%  
100" LONG  
INDALEX TOOL: MS-18867  
PULL TEST TO ASTM STANDARD  
B221  
B51957

PO Total: \$2,124.9

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

Do NOT ship BEFORE  
OCT 5!

PO Instructions: PLEASE ONLY SHIP THE FIRST WEEK OF OCTOBER

No substitution or deviation without  
consent.

Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 2

Change Date: 9/10/09